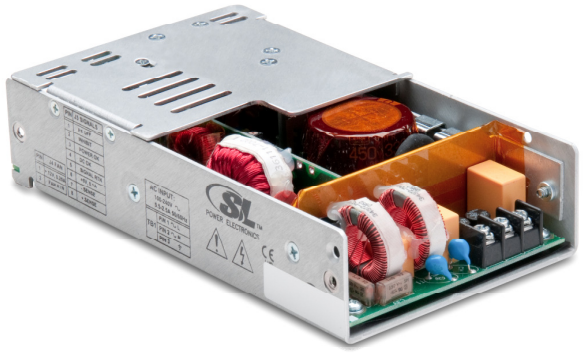
MINT1400A

400W Single Output Series

Medical – Universal Input Power Supply

2 Year Warranty

- *Compact 3.94" x 7" x 1.58", 1U compatible*
- *9.5 W/in³*
- *Up to 250W Convection Rating*
- *Efficiency up to 91%*
- *12Vdc to 48Vdc outputs, up to 400W*
- *Remote ON/OFF*
- *Safety approved to Medical and ITE Standards*
  - *EN/IEC/UL60601-1 and CSA 601.1*
  - *CSA/EN/IEC/UL60950-1, 2nd Edition*
- *Compliant to EN55011/22 Conducted Noise, Class B*
- *RoHS Compliant – Category 6*



International Safety Standard Approvals

CE RoHS cULus D

CONDOR™

Specifications

All Specifications are typical at nominal input, full load at 25°C unless otherwise stated.

AC Input	85-270VAC, 47-63 Hz single phase	**Turn On Time**	500mSec maximum
Input Current	120VAC: 4.2A, 230VAC: 2.1A	**Hold-up Time**	20 ms at 400W
Inrush Current	Active circuit, 37A max	**Overvoltage Protection**	See chart
Input Fuses	F1, F2: 6.3A	**Overload Protection**	Cycling type, 470W typical
Power Factor	0.99 typical, 0.96 minimum	**Overtemperature Protection**	Provided on all models, auto-recovery. See page 2 for cooling information
Efficiency	Typical 88% @ 120VAC, 91% @ 240VAC		
Remote Sense	Compensates for up to 500mV drop on output leads	**Switching Frequency**	Output: 170kHz ± 8kHz; PFC: 90kHz, ± 8kHz; Bias: 100kHz, ± 6 kHz
Output Power	400W with fan cooling. See derating chart for other conditions. Peak: 450W for 1 min., 10% duty cycle	**Safety Standards**	Medical: EN/IEC/UL 60601-1, CSA 601.1 ITE: CSA/EN/IEC/UL 60950-1, 2nd Edition
Ripple and Noise	1% pk-pk max., 20MHz BW, differential mode	**Isolation**	Input-Output: 4000VAC, Input-Ground: 1500VAC, Output-Ground: 500VAC
Output Voltages	See chart. Voltages adjustable +/- 5%	**Earth Leakage Current**	100µA at 120VAC, 60Hz Normal. 400µA at 264Vac, 60Hz SFC.
Total Regulation	See chart	**Operating Temperature**	0° to 70°C, refer to derating curve for ratings >40°C
Minimum Load	Not required	**Storage Temperature**	-40 to +85°C
Transient Response	500µs to 1%, 0.2A/µs, 3.5% Deviation	**Relative Humidity**	5% to 95%, non-condensing
Shock and Vibration	Shock: MIL-STD-810E, 516.4 part IV Vibration: 5Hz – 500Hz, 2.5 Grms	**Altitude**	Operating: -500 to 10,000 ft. Non-Operating: -500 to 40,000 ft.

Model Number Key

MINT 1 400 A 12 10 L 01

- **01 = Standard Model, 02 and higher indicates a modified model.**
- **"L" = Input Connector - EBY P/N 5002-03-N-12**
- **"10" = Output Connections - Bus Bars with #10 screws**
- **Output Voltage: "12" = 12V output, "24" = 24V output, etc.**
- **Model Configuration: "A" = Original Configuration; "C" = Optional fan cover included**
- **Output Power (Watts) - "400" = 400W**
- **# of Outputs**
- **Product Family: "M" = Medical, "I" = Internal, "NT" = New Technology**

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MINT1400A

400W Single Output Series

Medical – Universal Input Power Supply

2 Year Warranty

Model Number	Output Volts (V)	Output Parameters Output Current Fan Cooled	Output Current Convection	Ripple & Noise	Total Regulation
MINT1400A1210L01	12V	33.0A	21.0A	1%	2%
MINT1400A2410L01	24V	16.7A	10.4A	1%	2%
MINT1400A2810L01	28V	14.3A	8.9A	1%	2%
MINT1400A4810L01	48V	8.30A	5.2A	1%	2%

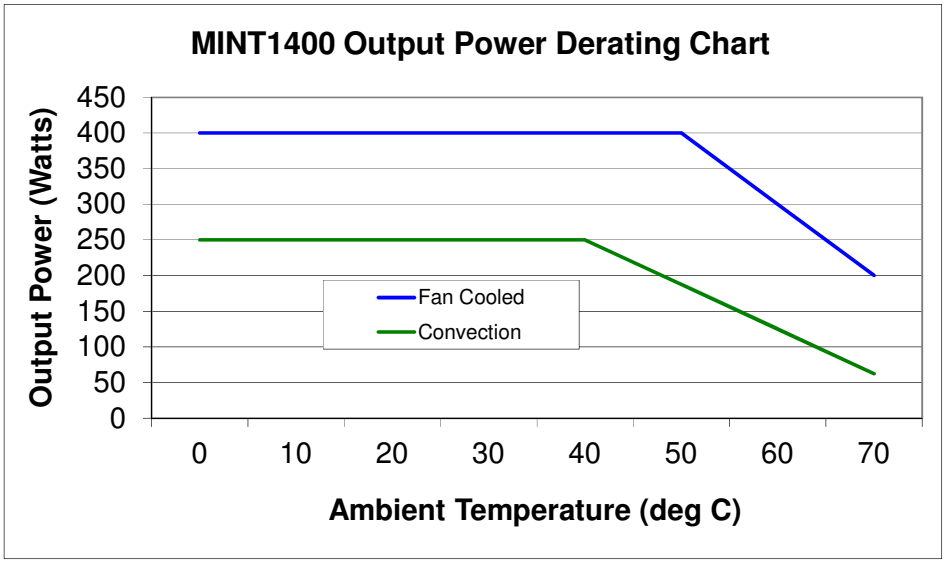
Signals

Inhibit: TTL LOW to inhibit	**DC OK:** HIGH when output is >90% of nominal
PS Off: TTL HIGH to inhibit	**Fan Output:** 12Vdc @ 250 mA.
Pwr OK TTL HIGH when AC is OK, 100-200 mS delay.	**5V Standby Voltage:** Always on, up to 100mA.
Pwr OK PF LOW 4 mS warning before loss of output regulation.	

EMI/EMC Compliance

Conducted Emissions	EN55011/22 Class B
Radiated Emissions	EN55011/22 Class A
Voltage Fluctuations	EN61000-3-3, complies
Static Discharge Immunity	EN61000-4-2, 6kV Contact Discharge, 8kV air discharge
Radiated RF Immunity	EN61000-4-3, 3V/m.
EFT/Burst Immunity	EN61000-4-4, 2kV/5kHz..
Line Surge Immunity	EN61000-4-5, 1kV differential, 2kV common-mode
Conducted RF Immunity	EN61000-4-6, 3Vrms
Power Frequency Magnetic Field Immunity	EN61000-4-8, 3A/m
Voltage Dip Immunity	EN61000-4-11 criteria A @ 250 Watts or less.
Line Frequency Harmonics	EN61000-3-2, Class A

Output Power Derating Curve



Note: For convection cooling, the power supply is required to be mounted on a heatsink or system chassis with a minimum of 150 in² of surface area.

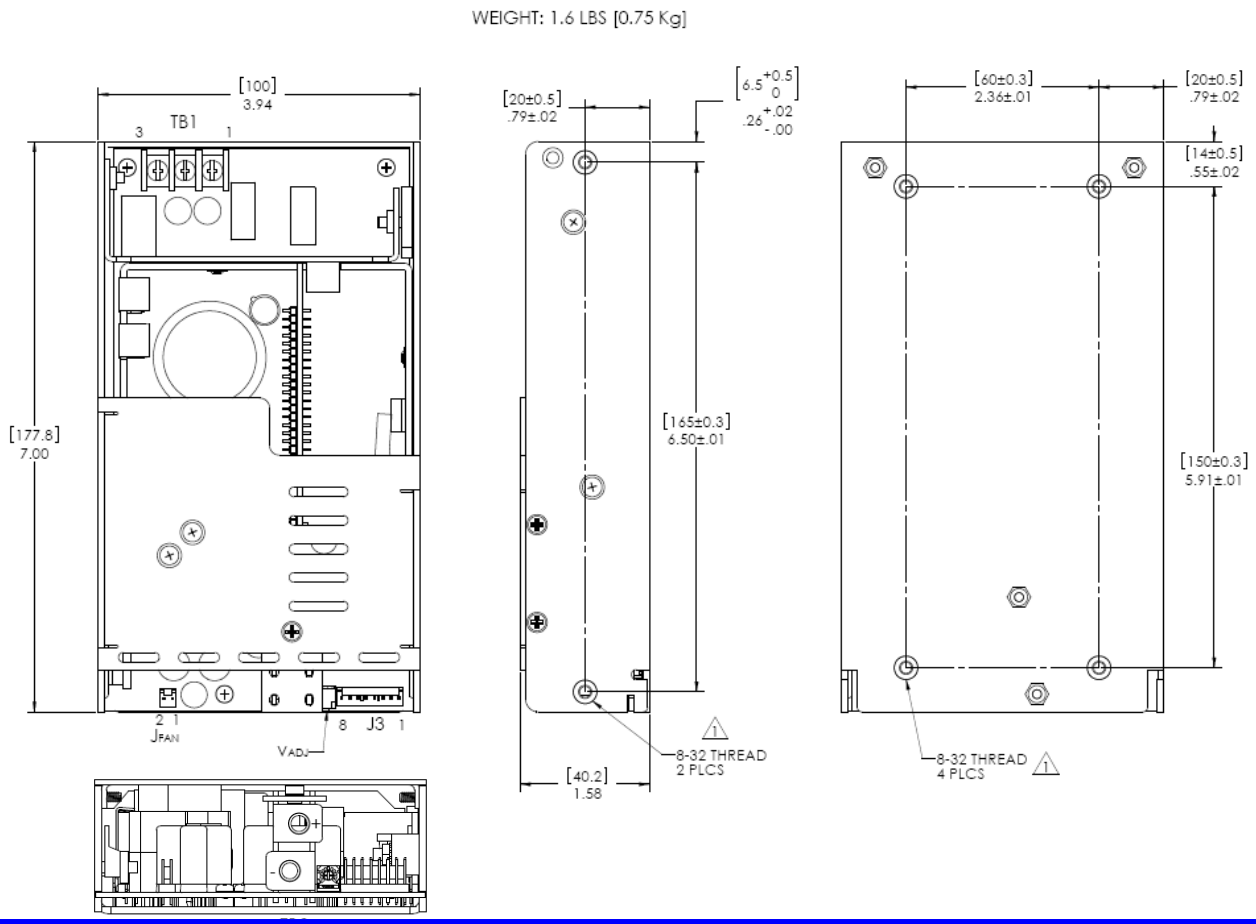
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MINT1400A

400W Single Output Series

Medical – Universal Input Power Supply **2 Year Warranty**

Outline Drawing & Connector Information



Connector Information

INPUT CONNECTOR (TB1):

Pin 1	Pin 2	Pin 3	Manufacturer's P/N:
AC Line	Neutral	Ground	EBY P/N 5002-03-N-12

SIGNAL CONNECTOR (J3) (optional):

Pin 1	Pin 2	Pin 3	Pin 4	Manufacturer's P/N:
PS OFF	INHIBIT	PWR OK	DC OK	AMP P/N 640456-8
Pin 5	**Pin 6**	**Pin 7**	**Pin 8**	
RTN	+5V Standby	- SENSE	+ SENSE	

DC OUTPUT CONNECTORS (TB2):

Pin 1	Pin 2	Manufacturer's P/N:
+Vout	-Vout	Bus bars with
		#10 screws

FAN OUTPUT CONNECTOR (J4) (optional):

Pin 1	Pin 2	Manufacturer's P/N:
+12V @ .25A	RTN	AMP P/N 640456-2

MATING CONNECTORS:

Mate For:	Manufacturer's P/N:
J1	#6-32 Lug, 0.325 Center
TB2	Wire - sized for output current rating.

Options:	Mate For:	Manufacturer's P/N:
Signals	J3	AMP P/N 1375820-8, Pins: 1375813-3
Fan Output	J4	AMP P/N 1375820-2, Pins: 1375813-3

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